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ABSTRACT

A study tested the hypothesis that elementary school teachers who were less authoritarian in their beliefs were more effective in the classroom. The independent variable was the California F-scale score of the 142 subjects (all education graduates of Tennessee Technological University), while dependent variables were measures of classroom effectiveness as determined by students, principals, and independent observers. Career base-line data were collected on each subject in the form of grade point averages, Weighted Commons test scores of the National Teacher Examination, and American College Test scores. Principals' evaluations of graduate performance were obtained using an evaluation instrument that allowed for rating in: (1) subject matter competence; (2) relations with students; (3) appropriateness of assignments and academic expectations; and (4) overall classroom performance. Two different pupil evaluation forms were used for different aged students, but both were used to assess five dimensions of teacher behavior. Three direct classroom observation systems were employed by trained observers to assess, in a quantifiable manner, the behavior of teachers and students engaged in the teaching-learning process. Based on study results, presented in seven tables, it was concluded that less authoritarian elementary school teachers were more effective than more authoritarian ones. (JMK)

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AUTHORITARIANISM AND TEACHER EFFECTIVENESS[1]

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The California F-scale developed by Adorno, et al. (1950) has been frequently used to study the relationship between authoritarianism and characteristics exhibited by teachers in the classroom. McGee (1955) found that the verbal response of teachers to statements on an opinion-attitude scale for measuring authoritarianism and teachers' overt behavior toward pupils in the classroom were positively correlated. In a study of 300 teachers, Ayers and Qualls (1982) found that there were relationships between scores achieved on the California F-scale and ratings of classroom performance derived from the Classroom Observation Record. Individuals who scored high on the F-scale tended to be more authoritarian in their beliefs and exhibited fewer of the characteristics of good teachers.

The purpose of this present study was to test the hypothesis that elementary teachers who were less authoritarian in their beliefs were more effective in the classroom. The independent variable was F-scale score, while the dependent variables were measures of classroom effectiveness as determined by students, principals, and independent observers.

Procedure

Each year from 1973 through 1982 the graduates of the bachelor's degree program for the preparation of elementary teachers at Tennessee Technological University were asked to participate in a longitudinal study of their performance after entering the teaching profession. The purpose of the study was to provide information for program development at the University. As an integral part of participation in the project, during their first year after receiving the bachelor's degree, the graduates completed the California F-scale, Forms 45 and 40. Classroom performance data were collected from principals, students each graduate taught, and by independent observers; and personal data about each graduate were collected from University permanent records. Following is a description of the basic instrumentation used in the study.

California F-scale

The California F-scale, Forms 45 and 40 is a 28-item instrument related to opinions regarding a number of social groups and issues about which some people agree and others disagree. The subjects in the study were asked to respond to each statement on a scale ranging from 1 to 7 (midpoint = 4) representing opposition (disagreement) to strong support

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(agreement). Total scores on the instrument can range from 28 to 192, with a midpoint of 112. Higher scores indicated subjects who were more authoritariam in their beliefs, while lower scores indicated subjects who were less authoritarian in their beliefs.

Career Base-Line Data

Career base-line data were collected on each subject. Grade point averages and scores from the Weighted Commons test of the National Teacher Examinations and the American College Test were obtained from University permanent records.

Principals' Evaluations of Subjects

Principals' evaluations of performance of the graduates were obtained using the Teacher Evaluation by Supervisor Instrument (Sandefur, 1970). This instrument allowed for the rating of the graduates in four areas: (1) subject matter competence, (2) relations with students, (3) appropriateness of assignments and academic expectations, and (4) overall classroom performance.

Student Evaluation of Teaching

There is considerable evidence that pupil evaluations of the teacher are a valid source of information. The Student Evaluation of Teaching (SET-I) developed by Veldman and Peck (Veldman, 1970) was utilized to obtain five dimensions of teacher behavior and an overall score in grades 4-12. These dimensions included: (1) Friendly and Cheerful, (2) Knowledgeable and Poised, (3) Lively and Interesting, (4) Firm Control, (5) Democratic Procedure, and (6) Total Score. A second version of the instrument (SET-II) was developed by Haak, Kleiber, and Peck (1972) for use in grades K-3. This instrument was used to assess five dimensions of teacher behavior as follows: (1) Rapport, (2) Interactional Competence, (3) Interaction Style, (4) Unreasonable Negativity, and (5) Fosterance of Self-Esteem.

Observational Systems

Three direct classroom observation systems were employed in the model including: (1) a ten-category system of interaction analysis (Amidon & Flanders, 1971), (2) the Classroom Observation Record (COR) developed by Ryans (1960), and (3) the Tuckman Teacher Feedback Form (Tuckman, 1976).

The ten-category interaction analysis system was used by trained research assistants to assess in a quantifiable manner the behavior of teachers and students engaged in the teaching-learning process. The COR measures four dimensions of student behavior and 18 dimensions of teacher behavior. Each dimension of pupil and teacher behavior was carefully described and defined in a glossary accompanying the recording form. A polarized seven-point interval was used by the research assistants to rate each pupil and teacher behavior dimension. The

Tuckman Teacher Feedback Form measured four dimensions of teacher characteristics including (1) Creativity, (2) Dynamism, (3) Organized Demeanor, and (4) Warmth and Acceptance.

Subject Selection

During the course of the ten years of the project, 148 individuals who had received the B.S. and had taught in the schools in grades 1-6 were considered for inclusion in the study. Therefore, in the present study an ex post facto research design was used. Previous research (Ayers, 1982) indicated that there were few differences in the graduates across the ten years of the study. Therefore, it was felt that graduates from various years could be combined to form the larger pool. The sample was divided into two groups, the 27 percent (N=42) who scored lowest on the F-scale (indicating they were less authoritarian in their beliefs) and the 27 percent who received the highest scores. The two groups were compared on the variables cited above, by use of the t-test.

Results

The results of the study were divided into four areas corresponding with the major instruments employed in data gathering. The mean F-scale score for the total sample of 142 subjects was 104.3 (SD=10.3). The sample was divided into two groups; the 27 percent with the highest F-scale scores and the 27 percent with the lowest F-scale scores. The sample size for both groups was 42 with the low group having achieved a mean score of 78.9 (SD=10.2) versus a mean score of 129.7 (SD=11.1) for the high group (see Table 1). Throughout the remainder of this section the low group is those subjects who achieved a lower mean score on the F-scale and were thus likely to be less authoritarian in their beliefs. The high group refers to the subjects who achieved higher mean scores on the F-scale and were likely to be more authoritarian in their beliefs.

A comparison was made of scores achieved by the two groups on the American College Test (completed by the subjects while they were seniors in high school), the Weighted Commons area of the National Teacher Examinations (completed by the subjects while they were seniors in college), and overall undergraduate grade point average. Table 1 shows the mean scores and standard deviations for each of the groups on each of the variables. Application of the t-test indicated there were significant differences between the two groups on each of the variables. In every case the low group (less authoritarian) had achieved higher scores or a higher grade point average than the high group (more authoritarian).

A comparison was made of principal ratings of the two groups of subjects (Table 2). The principals rated the subjects in the low groups significantly higher on the factors of subject matter competence and appropriateness of assignments. Even though the ratings were not significantly different, the principals rated the low group higher on the factors of relations with students and overall classroom performance.

Table 1

Comparison of Career Base-Line Variables for Subjects

Group	N	$\bar{X}$	SD	t-value
F-scale Score				
Low Group	42	78.9	10.2	21.78**
High Group	42	129.7	11.1	
Weighted Commons Exam. of NTE				
Low Group	38	588.6	61.1	3.93**
High Group	36	527.1	73.4	
American College Test Composite Score				
Low Group	32	19.0	3.9	3.77**
High Group	32	15.3	4.1	
Grade Point Average				
Low Group	42	3.08	0.65	2.07*
High Group	41	2.79	0.67	

*p < .05; **p < .01

Table 2

Comparison of Principals' Ratings of Subjects

Group	N	$\bar{X}$	SD	t-value
Subject Matter Competence				
Low Group	35	4.5	0.7	2.82**
High Group	36	3.9	0.8	
Relations with Students				
Low Group	34	4.4	1.0	0.90
High Group	36	4.3	0.8	
Appropriateness of Assignments				
Low Group	33	4.7	0.9	3.61**
High Group	36	4.0	0.7	
Overall Classroom Performance				
Low Group	33	4.3	0.8	1.48
High Group	36	4.0	0.7	

**p < .01

Table 3 shows the ratings given to the two groups of subjects (who were teaching in Grades 4-6) by their students. The students tended to rate the teachers in the low group higher than those in the high group. The differences were not significant. An examination of the data for the subjects in Grades 1-3 indicated similar findings (Table 4). In general, the students of the subjects rated the low group higher than the more authoritarian subjects.

Table 3

Comparison of Ratings of Subjects in Grades 4-6 by Their Students

Group	N	$\bar{X}$	SD	t-value
Friendly and Cheerful				
Low Group	18	348.4	32.4	0.85
High Group	14	336.1	46.3	
Knowledgeable and Poised				
Low Group	18	324.7	45.2	0.81
High Group	14	336.8	39.2	
Lively and Interesting				
Low Group	18	305.2	45.1	0.82
High Group	14	292.9	37.5	
Firm Control				
Low Group	18	316.5	39.1	0.00
High Group	14	316.5	32.4	
Democratic Procedure				
Low Group	18	260.7	48.2	0.21
High Group	14	257.1	48.4	
Overall Ratings				
Low Group	18	314.1	16.6	1.22
High Group	14	302.6	35.5	

Table 4

Comparison of Ratings of Subjects in Grades 1-3 by Their Students

Group	N	$\bar{X}$	SD	t-value
Rapport				
Low Group	17	5.81	1.37	0.17
High Group	23	5.86	0.71	
Interactional Competence				
Low Group	17	4.86	0.92	0.42
High Group	23	5.11	2.24	
Interaction Style				
Low Group	17	10.66	2.04	0.36
High Group	23	10.49	1.00	
Unreasonable Negativity				
Low Group	17	8.85	0.87	1.26
High Group	23	8.39	1.30	
Fosterance of Self-Esteem				
Low Group	17	7.00	1.46	0.97
High Group	23	6.60	1.12	

Data derived from the adminstration of Flanders Interaction Analysis allowed for the calculation of five teaching ratios. Table 5 shows the results of the administration of interaction analysis in the classrooms of the two groups of subjects. There were no significant differences between the two groups. However, the high group appeared to be using more indirect than direct teaching, and there was a greater ratio of student talk to teacher talk. On the opposite side, the low group tended to lecture less than the high group.

An examination of the data derived from use of the Classroom Observation Record is shown in Table 6. The low groups achieved greater scores than the high group on all three factors. Although the differences were not significant, the low group achieved higher scores in all areas.

Table 7 shows the results of the use of the Tuckman Teacher Feedback Form in the classrooms of the subjects. There were no significant differences between the two groups. However, the low group achieved higher mean scores on the four factors of the instrument than the high group.

Table 5

Comparison of Teaching Ratios for Subjects Derived from Flanders Interaction Analysis

Group	N	$\bar{X}$	SD	t-value
Indirect/Direct Teaching				
Low Group	37	0.95	0.84	0.79
High Group	39	1.57	4.72	
Revised Indirect/Direct Teaching				
Low Group	37	1.36	2.08	0.92
High Group	39	3.30	2.69	
Student Talk/Teacher Talk				
Low Group	37	0.71	0.62	1.00
High Group	39	1.76	-0.67	
Silence/Total Teaching				
Low Group	37	0.48	0.67	1.09
High Group	39	1.36	4.82	
Lecture/Total Teaching				
Low Group	37	0.43	0.17	0.94
High Group	39	1.15	4.74	

Table 6

Comparison of Ratings of Performance as Measured by Use of the Classroom Observation Record

Group	N	$\bar{X}$	SD	t-value
Factor I--Students				
Low Group	42	42.4	4.2	1.49
High Group	42	41.0	4.4	
Factor II--Teachers Cognitive				
Low Group	42	67.8	6.1	1.36
High Group	42	66.0	6.0	
Factor III--Teachers Affective				
Low Group	42	24.0	4.9	1.60
High Group	42	22.2	5.4	

Table 7

Comparison of Ratings of Subjects' Performance Utilizing the Tuckman Teacher Feedback Form

Group	N	$\bar{X}$	SD	t-value
Creativity				
Low Group	20	27.0	5.2	0.28
High Group	24	26.5	6.6	
Dynamism				
Low Group	20	28.0	6.2	0.52
High Group	24	26.8	8.2	
Organized Demeanor				
Low Group	20	34.7	3.7	0.84
High Group	24	33.4	5.9	
Warmth and Acceptance				
Low Group	20	37.1	4.2	1.60
High Group	24	34.1	7.4	

Conclusions and Recommendations

Based on the results of the study, it was concluded that teachers who had achieved a lower score on the California F-scale and, and thus were less authoritarian in their beliefs, were functioning at a higher level in the classroom. Thus, the hypothesis that less authoritarian teachers were more effective was accepted.

Although this study was carried out on a relatively small sample of subjects who were graduates of the same teacher training program, it was felt that the results are valid. The differences between the two groups were generally not significant. However, the information provided in this paper may be of use in developing programs oriented toward the affective dimensions of teaching. Also, the results of the study may have use in the development of selection criteria for preservice teachers and for counseling individuals who desire to enter the profession.

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